

ABSTRACT**PERIODIC ELECTROMAGNETIC STRUCTURE**

This invention relates to periodic electromagnetic structures (20) for use
5 over a relatively large range of frequencies. In particular, this invention relates
to microwave applications, such as antennas and low reflectivity structures. A
periodic electromagnetic structure (20) is provided that comprises an array of
conducting LC elements (22;22a,22b;42;52;68) in superposition with a
frequency-dependent dielectric (30;44;54;70) whose permittivity and/or
10 permeability varies according to the frequency of radiation incident thereon such
that the resonant frequency of the LC elements (22;22a,22b;42;52;68) follows
the frequency of the incident radiation.

(Fig. 5)